

AMENDMENT

Please amend the application as specified below:

In the Claims:

Please cancel without prejudice claims 15-16 and 35, and amend claims 14, 18, 34, and 36, as indicated below. The status and current version of the claims follows:

1-2. (Canceled)

3. (Previously presented) A buffer circuitry for buffering a radio-frequency (RF) signal, comprising:

a complementary pair of switches having an input terminal and output terminal, the input terminal of the complementary pair of switches configured to respond to the radio-frequency signal, the output terminal of the complementary pair of switches coupled to an output of the buffer circuitry; and

a power source, including a capacitor coupled to a current source, the power source coupled to the complementary pair of switches, the power source configured to supply power to the complementary pair of switches such that the buffer circuitry supplies a substantially constant power level at its output, wherein the input terminal of the complementary pair of switches receives the radio-frequency signal from a phase-lock loop circuitry coupled to the complementary pair of switches.

4. (Previously presented) The buffer circuitry according to claim 3, wherein the current source supplies an output current that is substantially constant over semiconductor fabrication process and temperature variations.

5. (Previously presented) The buffer circuitry according to claim 4, wherein the complementary pair of switches are capable of being controlled so as to power down the output of the buffer circuitry.

6. (Previously presented) The buffer circuitry according to claim 5, wherein the current source comprises a programmable current source.
7. (Previously presented) The buffer circuitry according to claim 6, wherein the power level at the output of the buffer circuitry may be configured by programming the output current of the current source.
8. (Previously presented) The buffer circuitry according to claim 7, wherein the output current of the current source is programmable in response to a plurality of digital signals.
9. (Previously presented) The buffer circuitry according to claim 8, wherein the complementary pair of switches comprises a series combination of a first switch and a second switch.
10. (Previously presented) The buffer circuitry according to claim 9, wherein a first terminal of the series combination of the first and second switches receives the output current of the current source, and wherein a second terminal of the series combination of the first and second switches couples to a reference potential.
11. (Previously presented) The buffer circuitry according to claim 10, wherein a first terminal of the capacitor couples to the first terminal of the combination of first and second switches, and wherein a second terminal of the capacitor couples to the reference potential.
12. (Previously presented) The buffer circuitry according to claim 11, wherein the first and second switches comprise complementary metal oxide semiconductor circuitry.
13. (Previously presented) The buffer circuitry according to claim 12, wherein the reference potential comprises a ground potential.
14. (Currently amended) A radio-frequency (RF) apparatus, comprising:
a first integrated circuit, including a first buffer, the first buffer comprising:

a first switch network configured to accept a first input signal, the first switch network configured to supply a first output signal at a first output; and
a power source, comprising a current source coupled to a capacitor, the power source coupled to the first switch network, the power source configured to supply power to the first switch network such that the first switch network provides a substantially constant power at the first output,
wherein the first integrated circuit comprises local-oscillator circuitry, and wherein the first switch network comprises a pair of controllable switches configured to respond to the first input signal.

15-17. (Canceled)

18. (Currently amended) The radio-frequency apparatus according to claim 1614, wherein the current source provides a substantially constant current over temperature and semiconductor fabrication process variations.

19. (Previously presented) The radio-frequency apparatus according to claim 18, wherein the current source comprises a programmable current source.

20. (Previously presented) The radio-frequency apparatus according to claim 19, wherein the power level at the output of the buffer circuitry may be configured by programming the output current of the current source.

21. (Previously presented) The radio-frequency apparatus according to claim 20, wherein the output current of the current source is programmable in response to a plurality of digital signals.

22. (Previously presented) The radio-frequency apparatus according to claim 21, wherein the pair of controllable switches comprises complementary switches.

23. (Previously presented) The radio-frequency apparatus according to claim 22, wherein the local-oscillator circuitry further comprises a phase-lock loop circuit, the phase-lock loop circuit configured to supply the first input signal to the first switch network.

24. (Previously presented) The radio-frequency apparatus according to claim 23, further comprising radio-frequency receiver circuitry included within a second integrated circuit coupled to the first integrated circuit, the radio-frequency receiver circuitry configured to receive a radio-frequency signal.

25. (Previously presented) The radio-frequency apparatus according to claim 24, further comprising a third integrated circuit coupled to the second integrated circuit, the third integrated circuit including digital signal-processing circuitry configured to accept a digital output of the radio-frequency receiver circuitry.

26. (Previously presented) The radio-frequency apparatus according to claim 14, wherein the first integrated circuit further comprises a second buffer, the second buffer including a second switch network coupled to the power source, the second switch network configured to accept a second input signal, the second switch network further configured to supply a second output signal at a second output, wherein the second switch network provides a substantially constant power at the second output.

27. (Previously presented) The radio-frequency apparatus according to claim 26, wherein the first and second output signals comprise a differential output signal in response to a differential input signal supplied as the first and second input signals.

28. (Previously presented) The radio-frequency apparatus according to claim 27, wherein the first and second buffers are further configured to be powered down selectively in response to a power-down signal.

29. (Previously presented) The radio-frequency apparatus according to claim 28, wherein the power source comprises a current source, the current source configured to supply a substantially constant output current.

30. (Previously presented) The radio-frequency apparatus according to claim 29, wherein the current source provides the substantially constant current over temperature and semiconductor fabrication process variations.

31. (Previously presented) The radio-frequency apparatus according to claim 30, wherein the current source comprises a programmable current source.

32. (Previously presented) The radio-frequency apparatus according to claim 31, wherein the power level at the output of the first and second switch networks may be configured by programming the output current of the current source.

33. (Previously presented) The radio-frequency apparatus according to claim 32, wherein the output current of the current source is programmable in response to a plurality of digital signals.

34. (Currently amended) A method of buffering a input radio-frequency (RF) input signal to generate a buffered radio-frequency signal, comprising:

accepting the radio-frequency signal as an input signal in a switch network;
generating the buffered radio-frequency signal at an output of the switch network; and
supplying power to the switch network by a power source so that the switch network has a substantially constant output power,

wherein the radio-frequency signal is received from a local-oscillator circuitry, and
wherein generating the buffered radio-frequency signal at an output of the switch network
comprises using a pair of controllable switches configured to respond to the radio-frequency input signal.

35. (Canceled)

36. (Currently amended) The method according to claim 3534, wherein supplying power to the switch network comprises including in the power source a current source coupled to a capacitor.

37. (Canceled).

38. (Previously presented) The method according to claim 36, wherein supplying power to the switch network comprises using the current source to provide a substantially constant current over temperature and semiconductor fabrication process variations.

39. (Previously presented) The method according to claim 38, wherein supplying power to the switch network comprises programming the current provided by the current source.

40. (Previously presented) The method according to claim 39, further comprising configuring the output power of the switch network by programming the current provided by the current source.

41. (Previously presented) The method according to claim 40, further comprising using a plurality of digital signals to program the current provided by the current source.

42. (Previously presented) The method according to claim 41, wherein receiving the radio-frequency input signal from a local-oscillator circuitry further comprises receiving the input signal from a phase-lock loop circuit.